

REMARKS

Applicants thank the examiner for his hard work in regards to examining the present application.

Claims 48-56, 61-62, and 66-69 remain in the application. Claims 1-8, 16-35, 58-60 and 63-65 were previously cancelled with the preliminary amendment filed December 14, 2001. Claims 9-15, 36-47, and 57 are hereby cancelled without prejudice to further prosecution. Independent claims 48, 55, 61, 66, and 69 are hereby amended. No new matter has been added.

35 USC 103 (a)

The pending claims stand rejected under 35 U.S.C. 103(a) as being unpatentable over Reinhorn, in view of Todokoro, in further view of U.S. Publication No. 2001/0010357 to Ose. Applicants respectfully traverse this rejection.

Independent claim 48 is currently amended and now recites as follows.

48. A method of imaging a substrate, comprising:

- a) exposing said substrate to an influx of photons, said photons having an energy selected to cause photoelectrons to leave said substrate,
- b) exposing said substrate to an influx of low-energy electrons, said electrons having a sufficiently low energy so that a substantial portion of said electrons are reflected from a surface of said substrate and both an energy and a current density profile selected to maintain surface charge present on said substrate at a predetermined level,
- c) focusing the portion of said influx of electrons which are reflected from said substrate to create an image of said substrate in a plane of a detector, and
- d) detecting the portion of said influx of electrons which are reflected from said substrate, thereby imaging a portion of said substrate.

(Additions shown by underline.)

Amended claim 48 now more distinctly recites exposing a substrate to both an influx of photons and an influx of low-energy electrons, where the electrons have “a sufficiently low energy so that a substantial portion of said electrons are reflected from a surface of said

substrate.” The claimed method of imaging with reflected (not secondary) electrons, while at the same time causing photoelectron emission such that surface charge is maintained, is not disclosed or suggested in the cited art.

Independent claim 55 has been similarly amended and now more distinctly recites exposing a substrate to both an influx of photons and an influx of low-energy electrons, where the electrons have “a sufficiently low energy so that a substantial portion of said electrons are reflected from a surface of said substrate.” The claimed method of imaging with both reflected (not secondary) electrons and emitted photoelectrons at the same time, while maintaining surface charge, is not disclosed or suggested in the cited art.

Independent claim 61 has been similarly amended and now more distinctly recites exposing a substrate to both an influx of high-energy electrons and an influx of low-energy electrons, where the low-energy electrons have “a sufficiently low energy so that a substantial portion of said electrons are reflected from a surface of said substrate.” The claimed method of filtering out the reflected electrons so that the secondary electrons are imaged, while maintaining surface charge, is not disclosed or suggested in the cited art.

Independent claim 66 has been similarly amended and now more distinctly recites exposing a substrate to both an influx of high-energy electrons and an influx of low-energy electrons, where the low-energy electrons have “a sufficiently low energy so that a substantial portion of said electrons are reflected from a surface of said substrate.” The claimed method of filtering out the secondary electrons so that the reflected electrons are imaged, while maintaining surface charge, is not disclosed or suggested in the cited art.

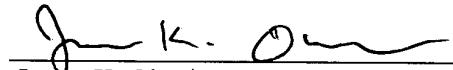
Independent claim 69 has been similarly amended and now more distinctly recites exposing a substrate to both an influx of high-energy electrons and an influx of low-energy electrons, where the low-energy electrons have “a sufficiently low energy so that a substantial portion of said electrons are reflected from a surface of said substrate.” The claimed method of filtering out the perpendicularly-emitted secondary electrons and specularly-scattered reflected electrons so that the selected electrons are imaged, while maintaining surface charge, is not disclosed or suggested in the cited art.

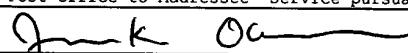
Conclusion

For the above-discussed reasons, applicants believe that remaining claims 48-56, 61-62, and 66-69 are patentable over the cited art. Favorable action is respectfully requested. The examiner is also invited to call the below-referenced attorney to discuss this case.

Respectfully Submitted,

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James K. Okamoto, Reg. No. 40,110
Tel: (408) 436-2111
Fax: (408) 436-2114

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